

**FACT SHEET FOR STATE WASTE DISCHARGE
PERMIT NO. ST-9123
WELCH'S FOODS, INC. - GRANDVIEW PLANTS**

SUMMARY

Welch's Foods, Inc. is seeking re-issuance of its State Wastewater Discharge Permit for its two plants in Grandview, WA. The existing permits were issued in 1999. Welch's Grandview plants produce primarily grape and apple concentrate and juice from fresh fruit. These plants discharge wastewater to the City of Grandview's Wastewater Treatment Facility (WWTF) through separate outfalls. Welch's Plants 1 & 2 are located on adjacent city blocks and have co-mingled processes. The proposed permit will consolidate the existing separate wastewater discharge permits for Plant 1 and Plant 2 into a single new permit.

Over the course of the existing permits, Welchs has not consistently complied with the State's permit limitations placed on the pH of its wastewater. In 2004, Welchs upgraded the pH neutralization treatment system for wastewater at Plant 2. The proposed permit contains a Compliance Schedule that requires the submittal of an Engineering Report for an upgrade to the pH neutralization system for wastewater at Plant 1.

The permit also requires that a new Operations and Maintenance (O&M) Manual be submitted. The purpose of the manual is to delineate necessary technical guidance and regulatory requirements for successful wastewater pretreatment. The manual is required to detail instructions and procedures for pretreatment of wastewater prior to discharge to the City of Grandview's sewers. In addition to wastewater pretreatment, the O&M Manual's appendices are required to contain copies of the Permittee's Solid Waste Control Plan, Spill and Slug Discharge Plan, a copy of the most current City of Grandview Industrial Wastewater User Contract, and a copy of the most current City of Grandview sewer use ordinance.

TABLE OF CONTENTS

	<u>Page</u>
SUMMARY	1
INTRODUCTION	4
GENERAL INFORMATION	5
BACKGROUND INFORMATION	5
DESCRIPTION OF THE FACILITY	5
History	5
Industrial Processes	6
Treatment Processes	7
Plant 1 Treatment Processes	8
Plant 2 Treatment Processes	8
TOXICS REDUCTION ENGINEER EFFICIENCY (TREE) REPORT	9
PERMIT STATUS	9
SUMMARY OF COMPLIANCE WITH THE PREVIOUS PERMIT	9
WASTEWATER CHARACTERIZATION	10
SEPA COMPLIANCE	11
PROPOSED PERMIT LIMITATIONS	11
TECHNOLOGY-BASED EFFLUENT LIMITATIONS	11
EFFLUENT LIMITATIONS BASED ON USER CONTRACT AND LOCAL LIMITS	11
Flow, BOD5, and TSS Limits	12
pH Limits	12
COMPARISON OF LIMITATIONS WITH THE EXISTING PERMIT ISSUED JULY 19, 1999	13
MONITORING REQUIREMENTS	13
OTHER PERMIT CONDITIONS	14
REPORTING AND RECORDKEEPING	14
OPERATIONS AND MAINTENANCE	14
PROHIBITED DISCHARGES	15
DILUTION PROHIBITED	15
SOLID WASTE PLAN	15
SPILL AND SLUG DISCHARGE PREVENTION AND CONTROL PLAN	16
COMPLIANCE SCHEDULE WITH ENGINEERING REPORT	16
GENERAL CONDITIONS	17
PUBLIC NOTIFICATION OF NONCOMPLIANCE	17
RECOMMENDATION FOR PERMIT ISSUANCE	17

REFERENCES FOR TEXT AND APPENDICES.....	18
APPENDIX A -- PUBLIC INVOLVEMENT INFORMATION.....	19
APPENDIX B -- GLOSSARY	20
APPENDIX C -- RESPONSE TO COMMENTS	25

INTRODUCTION

This fact sheet is a companion document to the draft State Waste Discharge Permit No. ST-9123. The Department of Ecology (the Department) is proposing to issue this permit, which will allow discharge of wastewater to the City of Grandview POTW. This fact sheet explains the nature of the proposed discharge, the Department's decisions on limiting the pollutants in the wastewater, and the regulatory and technical bases for those decisions.

Washington State law (RCW 90.48.080 and 90.48.160) requires that a permit be issued before discharge of wastewater to waters of the state is allowed. This statute includes commercial or industrial discharges to sewerage systems operated by municipalities or public entities which discharge into public waters of the state. Regulations adopted by the state include procedures for issuing permits and establish requirements which are to be included in the permit (Chapter 173-216 WAC).

This fact sheet and draft permit are available for review by interested persons as described in Appendix A--Public Involvement Information.

The fact sheet and draft permit have been reviewed by the Permittee. Errors and omissions identified in these reviews have been corrected before going to public notice. After the public comment period has closed, the Department will summarize the substantive comments and the response to each comment. The summary and response to comments will become part of the file on the permit and parties submitting comments will receive a copy of the Department's response. The fact sheet will not be revised. Changes to the permit will be addressed in Appendix C--Response to Comments.

GENERAL INFORMATION	
Applicant	Welch Foods Inc.
Facility Name and Address	Welch's Grandview, Plant 1 and Plant 2 504 Birch Avenue, Grandview, WA 98930
Type of Facility:	Food Processor
Facility Discharge Location	Plant 1 - Outfall #001: Latitude: 46° 15' 03" N Longitude: 119° 53' 02" W Plant 2 - Outfall #002: Latitude: 46° 15' 06" N Longitude: 119° 54' 17" W
Treatment Plant Receiving Discharge	City of Grandview Wastewater Treatment Facility
Contact at Facility	Name: Troy Mears Telephone #: 509-882-3112 x. 603
Responsible Official	Name: Terry Chambers Title: Welch's Grandview Operation Manager Address: PO Box 38, Grandview, WA 98930 Telephone #: 509-882-3112

BACKGROUND INFORMATION

DESCRIPTION OF THE FACILITY

History

The following information is from the company's 2003 annual report and website:

Welch's Foods, Inc., is the world's leading producer of jam and jelly products made from Concord and Niagara grapes. The company is headquartered in Concord, Massachusetts. Welch's is the food processing and marketing arm of the National Grape Growers Association. Organized in 1945, National Grape is a grower-owned, agricultural cooperative with 1,351 members.

The Welch Grape Juice Company, was founded in 1892 in New York. It began operations at the Plant 1 facility on Birch Street in Grandview in 1950. In 1956, this company was acquired by the National Grape Growers Association, at which time it was renamed Welch Foods, Inc.

Welch's Plant 2 facility on Avenue B in Grandview is adjacent to Plant 1. Plant 2 was owned and operated by the Yakima Valley Grape Producers, Inc. until 1997, when that organization joined the National Grape Growers Association. Since 1997 the plant has been operated by Welch's Foods, Inc.

Since July 1999, Welch's Plants 1 & 2 have had a single Industrial User Contract for their combined wastewater discharge to the City of Grandview Wastewater Treatment Facility (WWTF). This contract included a Schedule A – Capacity Allocation Summary which established monthly and annual contract allocations for flow, Biological Oxygen Demand (BOD) loadings, and Total Suspended Solids (TSS) loadings.

In 2003, Welch's formally requested that the Department combine the two separate permits into a single permit. The Department has determined that combining the permits is appropriate.

Industrial Processes

Welch's Foods, Inc. two plants in Grandview process various types of fresh fruit (apples, grapes, cranberries) into fruit concentrates and fruit juices. Water is used at Welch's for washing fruit, steam heating juice and cooling juice, cleaning equipment, and cooling equipment. Table 1 below provides a description of the major processes that generate wastewater at the facilities.

Table 1: Processes and Wastewater

Process	Waste Stream Name	Batch or Continuous Discharge	Plant
Grape Receiving	Receiving Cleanup Waste	Continuous	Plant 1 & 2
Apple Receiving	Receiving Cleanup Waste	Continuous	Plant 2
Juice Evaporation	Bottoms Water	Batch	Plant 1 & 2
Filtering	Filter Cleanup Water	Batch	Plant 1 & 2
General Operation	Process Water	Continuous	Plant 1 & 2
General Cleanup	General Cleanup / Tank Washing	Batch	Plant 1 & 2

Plant 1 is used for processing Concord and Niagara grapes, as well as cranberries into juice. At Plant 2, fresh apples and Concord grapes are processed into single-strength juice or concentrate, and the juice is then piped to the facility's tank farm. The large majority of tank farm volume is at the Plant 1 location.

Grapes are dumped from sealed stainless steel tanks on trucks into a hopper. The tanks contain juice released from the grapes as a result of picking and transport, and this juice is captured in the hopper. Stems are screened and sent to a hopper for transfer to a truck for use as cattle feed

or soil amendment. The grapes are crushed, heated, and enzymes and paper pulp added before being filtered and the solids squeezed in a vertical press.

The solids from the first squeezing are mixed with water (condensate) to extract additional juice, and then squeezed. The solids from the second squeezing are sent out as cattle feed or soil amendment. The rate of juice extraction from the grapes exceeds the evaporator capacity, so much of the juice is pasteurized and sent to cold storage in the facility's tank farm. The tank farm includes 60 large tanks of various volumes. A significant portion of this stored juice is concentrated throughout the year, prior to being transported to another facility for packaging. Most of this packaging occurs at the company's Kennewick facility.

Condensate from concentrating juices is much lower in strength (BOD and especially TSS) than the other wastewater generated during juice processing (principally wash water). Welch's is using some of the condensate for wash water and looking at increasing the amount of condensate used before discharge as wastewater.

A large amount of wastewater is generated when water is used to seal the compressors that serve the EIMCO vacuum drum filtration systems at both plants. (40,000 gpd in Plant 1).

As the tanks in the tank farm are emptied, the settled grape solids in the tank bottoms are processed and filtered for juice recovery.

The juice production at Welch's two plants in Grandview is co-mingled to a significant degree. Product is transferred between the two plants as equipment and capacity dictates and there is a set of pipes which cross Division Street between the two plants. The City has a single Industrial User Contract for treating all of the wastewater from both plants - there are no capacity issues in the sewers or other considerations which would require separate limitations or agreements for the discharges from the two plants. The contract includes single allocations for wastewater flow, BOD and TSS. Therefore, Welch's two existing State Wastewater Discharge permits at Grandview will be combined into one permit with the issuance of the proposed permit. The proposed permit will retain Plant 1's permit number as this was Welch's original plant in Grandview.

Treatment Processes

At both plants, the wastewater is screened prior to pH control and discharge to Grandview's sewer collection system.

Information regarding the projected volumes of wastewater to be discharged to the POTW from each plant is presented in the table below. The information was obtained from the Permittee's State Wastewater Discharge application.

Table 2: Projected Wastewater Volumes

	Maximum Daily gallons per day	Maximum Monthly gallons per day
Plant 1	962,280	560,430
Plant 2	431,610	214,440

Both Plant 1 and 2 employ closed-loop cooling towers for the wastewater streams heated in evaporation processes, prior to discharge. Approximately 8,500 gpd of non-contact cooling tower water and 4,100 gpd of boiler blow down water is discharged to the POTW (based on average yearly volumes).

Plant 1 Treatment Processes

Currently, the pH treatment system consists of a pH probe, with caustic and acid neutralizing solutions added to an approximately 12 ft. diameter wet-well prior to discharge to the sanitary sewer. The wet-well discharge pump is activated by a high and low float system currently set at 7.5 ft. depth on position and 11.0 ft. depth off position. The large capacity wet-well pumps (1200 gpm) are capable of emptying the complete contents of the wet-well in less than 10 minutes at current float settings. Prior to the end of the pump discharge cycle, fresh process wastewater dumps into the wet-well and is quickly discharged into the City sewer system. A partial review of June 2001 City pH monitoring and wastewater flow records show a relatively neutral discharge during the beginning of the pump discharge cycle with a significant downward pH trend throughout the pumping cycle. [A pumping rate of 1200 gpm would complete a pumping discharge cycle in about 2.5 minutes, given an effective volume of 2,957 gallons discharged.] This pumping cycle, along with the attendant swings in the level of the wastewater's pH, provides the rationale for the necessity of the pumped volume limit provision in the proposed permit.

The permit requires the Permittee to produce an Engineering Report and implement a compliance schedule that provides all known, available, and reasonable methods of prevention, control, and treatment (AKART) for control of the wastewater's pH at Plant 1 (S8). This is to be accomplished by **November 1, 2005**.

Plant 2 Treatment Processes

The pH system neutralization system at Plant 2 was replaced with a re-engineered system in August 2004. As detailed in later sections of this fact sheet, the old system did not consistently treat the wastewater to comply with the existing permit limits. At the time this fact sheet was written, the Department had not received as-built engineering drawings that detailed the upgrade. The permit (S8) requires the submittal of as-built engineer drawing for the upgraded pH neutralization facility by **May 1, 2005**.

TOXICS REDUCTION ENGINEER EFFICIENCY (TREE) REPORT

The Department of Ecology's Toxics Reduction Engineer Efficiency (TREE) Team provides technical assistance to industries through the use of trained staff from Ecology's Toxics Reduction Program. The TREE team prepared a report for Welch's in 2001 that recommended a series of phased improvements to reduce pH excursions outside permit and City sewer use ordinance limits. The pH excursions are associated with product spillage (acidic fruit waste) and caustic cleaning discharges. A summary of the recommended phased improvements are presented here:

1. Increase wastewater detention time in the wet-well and eliminate short-circuiting.
2. Install variable speed motors on discharge pumps.
3. Place a pH probe in discharge line to City and install piping that can return noncompliant wastewater to the wet-well.
4. Enhance buffering capacity of wastewater with addition of a carbonate/bicarbonate solution so that incidental spillage (or cleaning) would not cause the pH to drastically swing to a low (or high) pH.

Various aspects of the recommendations may have been included in the Plant 2 pH neutralization upgrade, however exactly which of the recommended improvements were added is unknown until the as-built engineering plans are submitted to the Department.

PERMIT STATUS

The existing individual wastewater discharge permits were issued to Welch's Plants 1 & 2 [ST-9123 & ST-9128] on July 19, 1999. The proposed permit combines those two permits.

An initial application for permit renewal was submitted to the Department on February 19, 2004 and accepted as complete by the Department on August 24, 2004.

SUMMARY OF COMPLIANCE WITH THE PREVIOUS PERMIT

Plant 2 last received a compliance inspection without sampling on October 9, 2003. Plant 1 last received a compliance inspection without sampling on September 14, 2004.

The existing permits for both Plant 1 and 2 placed restrictions on the range of pH of the wastewater discharged to the WWTF. During the history of the existing permit, the Permittee has not consistently achieved compliance based on Discharge Monitoring Reports (DMRs), as detailed below:

1. On May 11, 2004 Welch's notified the Department about a failure of pH neutralization equipment at Plant #2's main wastewater sump area. Wastewater with a pH of less than

2.0 was discharged for duration of approximately 3 hours. Flows during the event averaged approximately 200 gpm.

2. On July 6, 2004, Welch's reported a low pH event at Plant 2. Monitoring recorded a pH of less than 2 for 18 minutes in the facility's pH neutralization wet well.
3. For Plants 1 and 2 combined, Welch's discharge monitoring reports have noted 119 excursions with a pH less than 4.5 and 84 excursions with a pH greater than 11.5 during the period from January 2002 through May 2004.
4. During the same interval, there were 4 separate months when the total minutes for pH above 11.0 and/or less than 5.0 exceeded 7 hours and 26 minutes in a single month. This time period of allowable pH exceedances, is an explicit permit requirement in the existing permit.

WASTEWATER CHARACTERIZATION

The concentration of pollutants in the discharge was reported in the permit application and in discharge monitoring reports. The aggregate wastewater discharges from Plant 1 & 2 from January 2002 and through March 2004, as reported on the DMR's, are characterized for the following parameters:

Table 3: Plant 1 & 2 Aggregate Wastewater Characterization

Parameter	Unit	Value
FLOW	Gallons per day	423,000
BOD5	mg/L	1833
BOD5 lbs/day	Pounds per day	6,120
TSS mg/L	mg/L	341
TSS lbs/day	Pounds per day	1,192
pH Violations	Average number of excursions per month < 4.5 and > 11.5	7

WAC 173-303-090(6)(a)(i) categorizes a corrosive dangerous waste as "aqueous and has a pH less than or equal to 2 , or greater than or equal to 12.5". Welch's existing permit does not require the reporting of minimum and maximum pH discharge value and therefore this information was not reported in the DMRs. However, pH monitoring data collected by the City of Grandview WWTF employees from January 2002 to July 2004 has revealed the following number of occurrences when Welch's wastewater met the dangerous waste designation:

**Table 4: Number of pH Exceedances Below 2.5 and Above 12.5
from January 2002 to July 2004**

PLANT	# pH EXCEEDANCES
One	3 exceedances < 2.0 pH
One	1 exceedance > 12.5 Ph
Two	5 exceedances < 2.0 pH
Two	3 exceedances > 12.5 pH

SEPA COMPLIANCE

There are no SEPA compliance issues involved with this permit.

PROPOSED PERMIT LIMITATIONS

State regulations require that limitations set forth in a waste discharge permit must be based on the technology available to treat the pollutants (technology-based) or be based on the effects of the pollutants to the POTW (local limits). Wastewater must be treated using all known, available, and reasonable methods of prevention, control and treatment (AKART) and not interfere with the operation of the POTW.

The more stringent of the local limits-based or technology-based limits are applied to each of the parameters of concern. Each of these types of limits is described in more detail below.

TECHNOLOGY-BASED EFFLUENT LIMITATIONS

All waste discharge permits issued by the Department must specify conditions requiring AKART of discharges to waters of the state given in WAC 173-216-110. WAC 173-216-060 lists broad categories of prohibited discharges. A pH limit is imposed under the authority of WAC 173-216-060 (2)(b)(iv), as given above.

The facility has no federal 40 CFR effluent guidelines; however, the facility must comply with the General Pretreatment Regulations contained in 40 CFR Part 403. The proposed permit will include local limits for BOD, TSS and pH

EFFLUENT LIMITATIONS BASED ON USER CONTRACT AND LOCAL LIMITS

The points of compliance for Welch's wastewater discharge at Plants One and Two are the City of Grandview's sewer manholes immediately downstream from Welch's wastewater sumps. The City owns and maintains the effluent flow meters, composite sampling equipment, and pH meters located at these manholes.

Flow, BOD5, and TSS Limits

Applicable limits for flow, biological oxygen demand (BOD5), and total suspended solids (TSS) are given in Schedule A -- Welch Plant No. 1 and Welch Plant No. 2, Capacity Allocation Summary. This Capacity Allocation Summary is included in Welch's Industrial User Contract with the City of Grandview. The most recent Capacity Allocation Summary, dated January 5, 2004, is presented in the table below:

Table 5: Schedule A -- Capacity Allocation Summary

Month	Flow (MGD)	BOD5 (lbs/day)	TSS (lbs/day)
January	0.665	14,839	3,065
February	0.603	13,793	2,931
March	0.568	13,121	2,880
April	0.553	9,333	2,500
May	0.581	12,258	2,258
June	0.633	8,343	2,000
July	0.516	9,677	3,065
August	0.323	5,161	1,452
September	0.775	15,000	2,250
October	1.000	14,355	3,548
November	0.535	14,167	1,980
December	0.525	10,484	2,010

These limits will be placed in the proposed permit by reference to Schedule A -- Capacity Allocation Summary. The Schedule A Allocation Summary is required to be placed in the Permittee's O&M Manual as Appendix A. The Permittee is required to submit any revisions to Schedule A to the Department and include the revised capacity allocation in an updated O&M Manual.

pH Limits

The Grandview Municipal Code Title 13 Public Services, Chapter 12 Use of Public Sewers – Discharges has this provision:

13.12.120 Penalties for certain discharges

C. Any discharge of wastes from large industrial or commercial user having either:

- 1. A gravity discharge of wastewater to the sewer system for an average over a 15-minute period within a 60-minute duration; or*

2. A pumped discharge of wastewater to the sewer system of 25 percent of the pumped volume within a 60-minute period or for 25 percent of the pumping period within a 60-minute period;

of wastewater with a pH lower than five or higher than 11 or having any other corrosive property capable of causing damage or hazard to structures, equipment and personnel of the sewage works after June 1, 1997 shall be subject to a penalty. (Ord. 1488 § 1, 1997; Ord. 1429 § 2, 1995).

The proposed permit will adopt this Part C of Chapter 13.12.120 for its pH limits, by reference for wastewater discharges through Outfall #1 and Outfall #2 starting on the effective date of the permit. This specific ordinance is required to be included in the Operations and Maintenance (O&M) Manual as Appendix B. If the ordinance is modified during the course of the proposed permit's term, the revision is required to be placed in an updated O&M Manual.

COMPARISON OF LIMITATIONS WITH THE EXISTING PERMIT ISSUED JULY 19, 1999

Table 6: pH Limits

Existing Limits	Proposed Limits at Outfalls #002 and #001
When pH is continuously monitored, excursions between 5.0 and 4.5, or 11.0 and 11.5 standard units shall not be considered violations provided no single excursion exceeds 60 minutes in duration and the total of all excursions in a single calendar month does not exceed 7 hours and 26 minutes. All excursions below 4.5 or above 11.5 shall be violations of this permit's effluent limitation.	Beginning on February 1, 2005 the Permittee's pH limits for Plant 1 and Plant 2 shall be based City on Grandview's Sewer Use Ordinance [Chapter 13.12.120, Part C]. The limits shall constitute Appendix B of the O&M Manual.

MONITORING REQUIREMENTS

Monitoring, recording, and reporting are specified to verify that the treatment process is functioning correctly, and that effluent limitations are being achieved (WAC 173-216-110). Monitoring for compliance of the permit limits is accomplished by the City of Grandview.

The point of compliance for Welch's wastewater discharge permit requirements is the City of Grandview's sewer manholes where the City owned composite samplers are located. The City conducts all wastewater monitoring (flow, BOD5, TSS, and pH) for purposes of determining monetary charges agreed upon in the Industrial User Contract. These parameters are also analyzed in the City owned laboratory. The City reports the results to Welchs, which then uses

this information to fill out the Discharge Monitoring Reports required by Welch's existing permit.

The monitoring schedule is detailed in the proposed permit under Condition S2. Specified monitoring frequencies take into account the quantity and variability of the discharge, the treatment method, past compliance, significance of pollutants, and cost of monitoring.

The permit requires twice weekly composite sampling of Five-day Biological Oxygen Demand (BOD5) and Total Suspended Solids (TSS) concentrations at both plants. It requires that BOD5 and TSS loading calculations also be conducted twice weekly. The permit requires continuous sampling of wastewater flow through continuously recording flow measuring devices.

The proposed permit has a different approach for pH reporting than that of the existing permit. The pH limits in the existing permit are based on a federal regulation (40 CFR 401.17) that does not match the City's sewer use ordinance. The City bases its monitoring effort and determines surcharge penalties for pH violations on its municipal code, not the federal regulation. This has resulted in inconsistent reporting of permit violations (as reported on the Permittee's DMRs) over the term of the current permit. The proposed permit requires the Permittee to simply report the number of pH violations of the municipal code that occur over a month's period. Since the City records the number of pH violations monthly, so as to ascertain penalty surcharges, reporting the correct number of monthly violations can be accomplished without error.

OTHER PERMIT CONDITIONS

REPORTING AND RECORDKEEPING

The conditions of S3 are based on the authority to specify any appropriate reporting and recordkeeping requirements to prevent and control waste discharges (WAC 173-216-110 and 40 CFR 403.12 (e),(g), and (h)).

OPERATIONS AND MAINTENANCE

The proposed permit contains condition S.5. as authorized under Chapter 173-240-150 WAC and Chapter 173-216-110 WAC. It is included to ensure proper operation and regular maintenance of equipment, and to ensure that adequate safeguards are taken so that constructed facilities are used to their optimum potential in terms of pollutant capture and treatment. S4.A of the proposed permit requires submission of a new O&M manual for the entire wastewater system.

The O&M Manual is required to be reviewed annually and any changes are to be submitted to the Department. The manual is required to have an Appendix A which is the Permittee's Industrial User Contract's Schedule A – Capacity Allocation Summary. The manual is also required to have an Appendix B which is to contain that section of the City of Grandview's

Sewer Use Ordinance that details limitations on the pH of wastewater discharged [Chapter 13.12 -- Use Of Public Sewers – Discharges].

The manual is required to include as Appendix C, the facility's Spill And Slug Discharge Prevention And Control Plan. The manual is required to include as Appendix D, the facility's Solid Waste Control Plan.

PROHIBITED DISCHARGES

Certain pollutants are prohibited from being discharged to the POTW. These include substances which cause pass-through or interference, pollutants which may cause damage to the POTW or harm to the POTW workers (Chapter 173-216 WAC) and the discharge of designated dangerous wastes not authorized by this permit (Chapter 173-303 WAC).

As stated in the Wastewater Characterization section of this fact sheet, Welch's has had wastewater discharges with pH of less 2.0 or greater than 12.5 in the recent past that meet the hazardous waste designation criteria. The Permittee is required by the proposed permit to upgrade its pH neutralization treatment capabilities. This should prevent repeated occurrences of this type of discharge.

DILUTION PROHIBITED

The Permittee is prohibited from diluting its effluent as a partial or complete substitute for adequate treatment to achieve compliance with permit limitations.

SOLID WASTE PLAN

The Department has determined that the Permittee has a potential to cause pollution of the waters of the state from leachate of solid waste.

Under authority of RCW 90.48.080, the Permittee is required to develop and submit to the Department and the Jurisdictional Health Department, a Solid Waste Plan to prevent solid waste from causing pollution of waters of the state. The plan is required to meet the rule requirements of Chapter 173-350 WAC. This plan is required to be updated annually or as conditions change, which ever is more frequent.

The Solid Waste Plan is required to identify specific individuals who are responsible for said plan and a means to contact them during normal hours of business.

SPILL AND SLUG DISCHARGE PREVENTION AND CONTROL PLAN

The Department has determined that the Permittee stores a quantity of chemicals that have the potential to cause water pollution if accidentally released. The Department has the authority to require the Permittee to develop best management plans to prevent this accidental release under section 402(a)(1) of the Federal Water Pollution Control Act (FWPCA) and RCW 90.48.080.

The Permittee has developed a plan for preventing the accidental release of pollutants to state waters and for minimizing damages if such a spill occurs. The proposed permit requires the Permittee to update this plan and submit it to the Department.

COMPLIANCE SCHEDULE WITH ENGINEERING REPORT

The permit establishes a compliance schedule for the Permittee to comply with State Wastewater Discharge Standards for pH given in WAC 173-216-060 Prohibited Discharges. An engineering report that develops AKART for wastewater pH from Plant 1's effluent discharge to the City of Grandview WWTF is an integral part of the compliance schedule.

The Department has determined that the Permittee has frequently violated its permit limit for pH in the existing permits. The violations are the result of inadequate neutralization equipment and/or neutralization procedures.

For Plants 1 and 2 combined, Welch's has reported 119 excursions with a pH less than 4.5 and 84 excursions with a pH greater than 11.5 during the period from January 2002 through May 2004. For Plants 1 and 2 combined, Welch's has reported 4 separate months when the total minutes for pH above 11.0 and/or less than 5.0 exceeded 7 hours and 26 minutes in a single month. These are all violations of the existing permit.

As enumerated in this fact sheet's Table 4, since January 2002 the wastewater's pH attained a dangerous waste category as defined in Chapter 173-303 WAC, on 12 occasions.

During July and August of 2004, the Permittee upgraded its pH control facility at Plant 2. The upgrade at Plant 2 fundamentally changed the procedure by which the wastewater's pH is handled. The proposed permit requires the submittal of the "as built" engineering drawings for the upgraded pH neutralization facility, in addition to giving the Department the new procedures for pH neutralization at Plant 2.

Procedures for pH control and basic pH control infrastructure at Plant 1 remain unchanged. Therefore, the proposed permit requires the submittal of an Engineering Report for pH that establishes AKART for attaining compliance with the pH limit given in the proposed permit's S.1. The proposed permit also establishes a deadline for achieving compliance with the permit requirements for pH.

The Department realizes that the more restrictive pH limits imposed by the proposed permit (5 to 11 as opposed to 4.5 to 11.5 in the current permit) may result in an increased number of violations at Plant # 1 (i.e., discharges with pH of 4.5 to 4.9 or 11.1 to 11.5) until such time that the upgrade is implemented. The Department will evaluate monthly discharge reports and may exercise prosecutorial discretion in response to these minor violations as long as the Permittee exhibits compliance with other permit conditions and displays a good faith effort to meet the permit's Compliance Schedule for the pH treatment upgrade.

GENERAL CONDITIONS

General Conditions are based directly on state laws and regulations and have been standardized for all industrial waste discharge to POTW permits issued by the Department.

Condition G1 requires responsible officials or their designated representatives to sign submittals to the Department. Condition G2 requires the Permittee to allow the Department to access the treatment system, production facility, and records related to the permit. Condition G3 specifies conditions for modifying, suspending or terminating the permit. Condition G4 requires the Permittee to apply to the Department prior to increasing or varying the discharge from the levels stated in the permit application. Condition G5 requires the Permittee to construct, modify, and operate the permitted facility in accordance with approved engineering documents. Condition G6 prohibits the Permittee from using the permit as a basis for violating any laws, statutes or regulations. Conditions G7 and G8 relate to permit renewal and transfer. Condition G9 requires the Permittee to control production or wastewater discharge in order to maintain compliance with the permit. Condition G10 prohibits the reintroduction of removed pollutants into the effluent stream for discharge. Condition G11 requires the payment of permit fees. Condition G12 describes the penalties for violating permit conditions.

PUBLIC NOTIFICATION OF NONCOMPLIANCE

A list of all industrial users which were in significant noncompliance with Pretreatment Standards or Requirements during any of the previous four quarters may be annually published by the Department in a local newspaper. Accordingly, the Permittee is apprised that noncompliance with this permit may result in publication of the noncompliance.

RECOMMENDATION FOR PERMIT ISSUANCE

This proposed permit meets all statutory requirements for authorizing a wastewater discharge, including those limitations and conditions believed necessary to control toxics. The Department proposes that the permit be issued for 5 years.

REFERENCES FOR TEXT AND APPENDICES

Washington State Department of Ecology.

Laws and Regulations (<http://www.ecy.wa.gov/laws-rules/index.html>)

Permit and Wastewater Related Information

(<http://www.ecy.wa.gov/programs/wq/wastewater/index.html>)

APPENDIX A -- PUBLIC INVOLVEMENT INFORMATION

The Department has tentatively determined to reissue a permit to the applicant listed on page 1 of this fact sheet. The permit contains conditions and effluent limitations which are described in the rest of this fact sheet.

The Department published a Public Notice of Application and Draft (PNOA/D) on October 27, and November 3, 2004 in the Grandview Herald to inform the public that an application, draft permit and fact sheet were available for review. Interested persons are invited to submit written comments regarding the draft permit. The draft permit, fact sheet, and related documents are available for inspection and copying between the hours of 8:00 a.m. and 5:00 p.m. weekdays, by appointment, at the regional office listed below. Written comments should be mailed to:

Water Quality Permit Coordinator
Department of Ecology
Central Regional Office
15 West Yakima Avenue, Suite 200
Yakima, WA 98902

Any interested party may comment on the draft permit or request a public hearing on this draft permit within the thirty (30) day comment period to the address above. The request for a hearing shall indicate the interest of the party and reasons why the hearing is warranted. The Department will hold a hearing if it determines there is a significant public interest in the draft permit (WAC 173-216-100). Public notice regarding any hearing will be circulated at least thirty (30) days in advance of the hearing. People expressing an interest in this permit will be mailed an individual notice of hearing.

Comments should reference specific text followed by proposed modification or concern when possible. Comments may address technical issues, accuracy and completeness of information, the scope of the facility's proposed coverage, adequacy of environmental protection, permit conditions, or any other concern that would result from issuance of this permit.

The Department will consider all comments received within thirty (30) days from the date of public notice of draft indicated above, in formulating a final determination to issue, revise, or deny the permit. The Department's response to all significant comments is available upon request and will be mailed directly to people expressing an interest in this permit.

Further information may be obtained from the Department by telephone, 509/457-7105, or by writing to the address listed above.

This permit was prepared by Jim Leier.

APPENDIX B -- GLOSSARY

Ammonia—Ammonia is produced by the breakdown of nitrogenous materials in wastewater. Ammonia is toxic to aquatic organisms, exerts an oxygen demand, and contributes to eutrophication. It also increases the amount of chlorine needed to disinfect wastewater.

Average Monthly Discharge Limitation—The average of the measured values obtained over a calendar month's time.

Best Management Practices (BMPs)--Schedules of activities, prohibitions of practices, maintenance procedures, and other physical, structural and/or managerial practices to prevent or reduce the pollution of waters of the State. BMPs include treatment systems, operating procedures, and practices to control: plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. BMPs may be further categorized as operational, source control, erosion and sediment control, and treatment BMPs.

BOD₅--Determining the Biochemical Oxygen Demand of an effluent is an indirect way of measuring the quantity of organic material present in an effluent that is utilized by bacteria. The BOD₅ is used in modeling to measure the reduction of dissolved oxygen in a receiving water after effluent is discharged. Stress caused by reduced dissolved oxygen levels makes organisms less competitive and less able to sustain their species in the aquatic environment. Although BOD is not a specific compound, it is defined as a conventional pollutant under the federal Clean Water Act.

Bypass—The intentional diversion of waste streams from any portion of the collection or treatment facility.

Categorical Pretreatment Standards—National pretreatment standards specifying quantities or concentrations of pollutants or pollutant properties which may be discharged to a POTW by existing or new industrial users in specific industrial subcategories.

Compliance Inspection - Without Sampling--A site visit for the purpose of determining the compliance of a facility with the terms and conditions of its permit or with applicable statutes and regulations.

Compliance Inspection - With Sampling--A site visit to accomplish the purpose of a Compliance Inspection - Without Sampling and as a minimum, sampling and analysis for all parameters with limits in the permit to ascertain compliance with those limits; and, for municipal facilities, sampling of influent to ascertain compliance with the 85 percent removal requirement. Additional sampling may be conducted.

Composite Sample—A mixture of grab samples collected at the same sampling point at different times, formed either by continuous sampling or by mixing discrete samples. May be

“time-composite”(collected at constant time intervals) or “flow-proportional” (collected either as a constant sample volume at time intervals proportional to stream flow, or collected by increasing the volume of each aliquot as the flow increased while maintaining a constant time interval between the aliquots.

Construction Activity—Clearing, grading, excavation and any other activity which disturbs the surface of the land. Such activities may include road building, construction of residential houses, office buildings, or industrial buildings, and demolition activity.

Continuous Monitoring –Uninterrupted, unless otherwise noted in the permit.

Engineering Report—A document, signed by a professional licensed engineer, which thoroughly examines the engineering and administrative aspects of a particular domestic or industrial wastewater facility. The report shall contain the appropriate information required in WAC 173-240-060 or 173-240-130.

Grab Sample—A single sample or measurement taken at a specific time or over as short period of time as is feasible.

Industrial User—A discharger of wastewater to the sanitary sewer which is not sanitary wastewater or is not equivalent to sanitary wastewater in character.

Industrial Wastewater—Water or liquid-carried waste from industrial or commercial processes, as distinct from domestic wastewater. These wastes may result from any process or activity of industry, manufacture, trade or business, from the development of any natural resource, or from animal operations such as feed lots, poultry houses, or dairies. The term includes contaminated storm water and, also, leachate from solid waste facilities.

Interference— A discharge which, alone or in conjunction with a discharge or discharges from other sources, both:

- a. Inhibits or disrupts the POTW, its treatment processes or operations, or its sludge processes, use or disposal and;
- b. Therefore is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation) or of the prevention of sewage sludge use or disposal in compliance with the following statutory provisions and regulations or permits issued thereunder (or more stringent State or local regulations): Section 405 of the Clean Water Act, the Solid Waste Disposal Act (SWDA) (including title II, more commonly referred to as the Resource Conservation and Recovery Act (RCRA), and including State regulations contained in any State sludge management plan prepared pursuant to subtitle D of the SWDA), sludge regulations appearing in 40 CFR Part 507, the Clean Air Act, the Toxic Substances Control Act, and the Marine Protection, Research and Sanctuaries Act.

Local Limits—Specific prohibitions or limits on pollutants or pollutant parameters developed by a POTW.

Maximum Daily Discharge Limitation—The highest allowable daily discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. The daily discharge is calculated as the average measurement of the pollutant over the day.

Method Detection Level (MDL)--The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is above zero and is determined from analysis of a sample in a given matrix containing the analyte.

Pass-through— A discharge which exits the POTW into waters of the-State in quantities or concentrations which, alone or in conjunction with a discharge or discharges from other sources, is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation), or which is a cause of a violation of State water quality standards.

pH—The pH of a liquid measures its acidity or alkalinity. A pH of 7 is defined as neutral, and large variations above or below this value are considered harmful to most aquatic life.

Potential Significant Industrial User--A potential significant industrial user is defined as an Industrial User which does not meet the criteria for a Significant Industrial User, but which discharges wastewater meeting one or more of the following criteria:

- a. Exceeds 0.5 % of treatment plant design capacity criteria and discharges <25,000 gallons per day or;
- b. Is a member of a group of similar industrial users which, taken together, have the potential to cause pass through or interference at the POTW (e.g. facilities which develop photographic film or paper, and car washes).

The Department may determine that a discharger initially classified as a potential significant industrial user should be managed as a significant industrial user.

Quantitation Level (QL)-- A calculated value five times the MDL (method detection level).

Significant Industrial User (SIU)--

- 1) All industrial users subject to Categorical Pretreatment Standards under 40 CFR 403.6 and 40 CFR Chapter I, Subchapter N and;

- 2) Any other industrial user that: discharges an average of 25,000 gallons per day or more of process wastewater to the POTW (excluding sanitary, noncontact cooling, and boiler blow-down wastewater); contributes a process wastestream that makes up 5 percent or more of the average dry weather hydraulic or organic capacity of the POTW treatment plant; or is designated as such by the Control Authority* on the basis that the industrial user has a reasonable potential for adversely affecting the POTW's operation or for violating any pretreatment standard or requirement (in accordance with 40 CFR 403.8(f)(6)).

Upon finding that the industrial user meeting the criteria in paragraph 2, above, has no reasonable potential for adversely affecting the POTW's operation or for violating any pretreatment standard or requirement, the Control Authority* may at any time, on its own initiative or in response to a petition received from an industrial user or POTW, and in accordance with 40 CFR 403.8(f)(6), determine that such industrial user is not a significant industrial user.

*The term "Control Authority" refers to the Washington State Department of Ecology in the case of non-delegated POTWs or to the POTW in the case of delegated POTWs.

Slug Discharge—Any discharge of a non-routine, episodic nature, including but not limited to an accidental spill or a non-customary batch discharge to the POTW. This may include any pollutant released at a flow rate which may cause interference with the POTW.

State Waters—Lakes, rivers, ponds, streams, inland waters, underground waters, salt waters, and all other surface waters and watercourses within the jurisdiction of the state of Washington.

Stormwater—That portion of precipitation that does not naturally percolate into the ground or evaporate, but flows via overland flow, interflow, pipes, and other features of a storm water drainage system into a defined surface water body, or a constructed infiltration facility.

Technology-based Effluent Limit—A permit limit that is based on the ability of a treatment method to reduce the pollutant.

Total Coliform Bacteria—A microbiological test which detects and enumerates the total coliform group of bacteria in water samples.

Total Dissolved Solids—That portion of total solids in water or wastewater that passes through a specific filter.

Total Suspended Solids (TSS)--Total suspended solids is the particulate material in an effluent. Large quantities of TSS discharged to a receiving water may result in solids accumulation. Apart from any toxic effects attributable to substances leached out by water, suspended solids may kill fish, shellfish, and other aquatic organisms by causing abrasive injuries and by clogging the gills and respiratory passages of various aquatic fauna. Indirectly, suspended solids can screen out

light and can promote and maintain the development of noxious conditions through oxygen depletion.

Water Quality-based Effluent Limit—A limit on the concentration of an effluent parameter that is intended to prevent the concentration of that parameter from exceeding its water quality criterion after it is discharged into a receiving water.

APPENDIX C -- RESPONSE TO COMMENTS

No comments were received by the Department of Ecology.